

Substitute for Form 1449/PTO				Complete if Known	
<div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; border-radius: 50%; padding: 10px; margin-right: 10px; text-align: center;"> OIP JAN 26 2004 102 </div> <div> <h2 style="margin: 0;">INFORMATION DISCLOSURE</h2> <h2 style="margin: 0;">STATEMENT BY APPLICANT</h2> <p style="margin: 0; font-size: small;">(use as many sheets as necessary)</p> </div> </div>				Application Number	09/837,701
				Filing Date	April 17, 2001
				First Named Inventor:	Xiaodong Li
				Art Unit	2681 2686
				Examiner Name	Not Yet Assigned
<div style="display: flex; justify-content: space-between;"> Sheet 1 of 1 1 </div>				Attorney Docket Number	005158.P007X

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)				
		US-	5,734,967	3/31/1998	Kotzin et al.	11
		US-	5,886,988	3/23/1999	Yun et al.	11
		US-	5,887,245	3/23/1999	Lindroth et al.	11
		US-	5,933,421	8/3/1999	Alamouti, et al.	11
		US-	6,061,568	5/9/2000	Dent	11
		US-	6,108,374	8/22/2000	Balachandran et al.	11
		US-	6,226,320 B1	5/1/2001	Hakkinen et al.	11
		US-	6,366,195 B1	4/2/2002	Harel et al.	11
		US-	6,477,158 B2	11/5/2002	Take	11
		US-	2003/0067890 A1	4/10/2003	Goel et al.	11
		US-	2003/0169824 A1	9/11/2003	Chayat	11
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FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)				
		JP	06029922		2/4/1994	Mitsuru et al.	11	

Examiner Signature		Date Considered	2/6/04
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS.
SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Substitute for Form 1449A/PTO (Modified)
INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

Complete if Known

Application Number	09/837,701
Filing Date	April 17, 2001
First Named Inventor:	Xiaodong Li
Group Art Unit	2681 26
Examiner Name	Unassigned
Attorney Docket Number	005158.P007X

Sheet	1	of	2
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U.S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS

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Examiner
Signature

Date Considered

2/14/04

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard S.3). ⁴For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

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Substitute for Form 1449A/PTO (Modified)

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

SEP 19 2002

Sheet

005158.P006 2

Complete if Known

Application Number	09/837,701
Filing Date	April 17, 2001
First Named Inventor:	Xiaodong Li
Group Art Unit	2681 2686
Examiner Name	Unassigned <i>Conlee</i>
Attorney Docket Number	005158.P007X

OTHER ART - NO PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
<i>V</i>	<i>R</i>	WONG, C.Y., et al., <i>Multiuser OFDM With Adaptive Subcarrier, Bit, and Power Allocation</i> , IEEE Journal on Selected Areas in Communications, October 1999, IEEE Inc., New York, USA, Vol. 17, Nr. 10, pages 1747-1758, XP000854075, ISSN: 0733-8716 Sections I and II abstract.	

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Examiner
Signature*J. Carter*Date
Considered*2/16/02*

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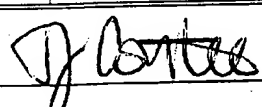
Substitute for Form 1449A/PTO (Modified)				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Application Number	09/837,701
				Filing Date	April 17, 2001
				First Named Inventor:	Xiaodong Li
				Group Art Unit	2681 <i>2684</i>
				Examiner Name	Unassigned <i>Cortez</i>
Attorney Docket Number	005158.P007X				
Sheet 2	of 2				
OTHER ART - NO PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			
<i>RZ</i> ↓	Y	GRUENHEID, R. et al: "Adaptive Modulation and Multiple Access for the OFDM Transmission Technique", Wireless Personal Communications, Kluwer Academic Publishers, NL, Vol. 13, NR. 1/2, Year 2000, pages 5-13 XP000894156, ISSN: 0929-6212.			
	Z	MOTEGI, M. et al.: "Optimum Band Allocation According to Subband Condition for BST-OFDM" 11 th IEEE International Symposium on Personal Indoor and Mobile Radio Communications, vol. 2, 18-21 September 2000, pages 1236-1240, XP002213669, Piscataway, NJ, USA, ISBN: 0-7803-6463-5.			
	AA	KAPOOR, S. et al.: "Adaptive Interference Suppression in Multiuser Wireless OFDM Systems Using Antenna Arrays" IEEE Transactions on Signal Processing, vol. 47, no. 12, December 1999, pages 3381-3391, XP000935422, IEEE, New York, USA, ISSN: 1053-587X.			
	BB	YE LI, et al.: "Clustered OFDM with channel estimation for high rate wireless data", Mobile Multimedia Communications, 1999. (MOMUC '99). 1999 IEEE International Workshop on San Diego, CA, USA, IEEE, US, 15 November 1999, pages 43-50, XP010370695, ISBN: 0-7803-5904-6.			
	CC	NOGUEROLES, R. et al.: "Improved Performance of a Random OFDMA Mobile Communication System" Vehicular Technology Conference, 1998. VTC 98. 48 th IEEE Ottawa, Ontario, Canada, 18-21 May 1998, (1998-05-18), pages 2502-2506, XP010288120, ISBN: 0-7803-4320-4.			
DD	KINUGAWA, Y. et al.: "Frequency and Time Division Multiple Access with Demand-Assignment Using Multicarrier Modulation for Indoor Wireless Communications Systems", IEICE Transactions on Communications, Institute of Electronics Information and Comm. Eng. Tokyo, Japan, vol. E77-B, NR. 3, March 1994, pages 396-402, XP000451014, ISSN: 0916-8516.				
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 0 auto;"> RECEIVED NOV 06 2002 Technology Center 2600 </div>					

Examiner Signature	<i>J Cortez</i>	Date Considered	<i>2/10/01</i>
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*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

¹Unique citation designation number. ²Applicant is to place a check mark here if English language Translation is attached.

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Form PTO-1449 (Modified)				Atty Docket No.: 005158.P007X		Serial No.: 09/837,701	
List of Patents and Publications Statement (Use several sheets if necessary)				Applicants: Li et al. Filing Date: April 17, 2001			
REFERENCE DESIGNATION				U.S. PATENT DOCUMENTS			
Exam. Initial		Date	Document Number	Name	Class	Sub- Class	Filing Date
JL		05/23/00	6,067,290	Paulraj et al.	370	329	07/30/99
		05/16/00	6,064,694	Clark et al.	375	224	09/30/97
		05/16/00	6,064,692	Chow	375	219	06/20/97
		04/18/00	6,052,594	Chuang et al.	455	450	04/30/97
		03/21/00	6,041,237	Farsakh	455	450	04/02/98
		12/21/99	6,005,876	Cimini, Jr. et al.	370	525	09/24/96
		10/26/99	5,973,642	Li et al.	342	378	04/01/98
		09/21/99	5,956,642	Larsson et al.	455	449	11/25/96
FOREIGN PATENT DOCUMENTS							
No.		Document No.	Date	Country	Name	Class	Sub- Class
OTHER ART (Including Author, Title, Date, Pertinent Pages, etc.)							
JL		BENDER et al., <i>CDMA/HDR: A Bandwidth-Efficient High-Speed Wireless Data Service for Nomadic Users</i> , IEEE Communications Magazine, July 2000, pp. 70-87.					
		TSOULOS, G.V., <i>Smart Antennas For Mobile Communication Systems: Benefits And Challenges</i> , Electronics & Communication Engineering Journal, April 1999, pp. 84-94.					
		SHAD et al., <i>Indoor SDMA Capacity Using a Smart Antenna Basestation</i> , 1997 IEEE, pp. 868-872.					
		FARSAKH, CHRISTOF and NOSSEK, JOSEF A., <i>On the Mobile Radio Capacity Increase Through SDMA</i> , no date (after 1997).					
		FRULLONE et al., <i>PRMA Performance in Cellular Environments with Self-Adaptive Channel Allocation Strategies</i> , IEEE Transactions on Vehicular Technology, November 1996, pp.657-665 Vol. 45, No. 4.					
		XU, GUANGHAN and LI, SAN-QI, <i>Throughput Multiplication of Wireless Lans for Multimedia Services: SDMA Protocol Design</i> , 1994 IEEE, pp. 1326-1332.					
		WARD, JAMES and COMPTON, R. TED, JR., <i>High Throughput Slotted ALOHA Packet Radio Networks with Adaptive Arrays</i> , IEEE Transactions on Communications, March 1993, pp.460-470, Vol. 41, No. 3.					
Examiner 				Date Considered 1/26/01			
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